

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in and relating to the Fixing of Bung Rings in Non-Metal Packing Containers

I, ALFONS MAUSER, personally responsible partner of the firm MAUSER KOMMANDIT-GESELLSCHAFT, of 28/30 Marienstrasse, Köln-Ehrenfeld, Germany, and of German nationality, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to the fixing of a bung ring in non-metal packing containers, more particularly in containers of the kind, in which the shell and the bottom are made of cardboard or plywood, in which the lining may consist of a metal foil suited to the contents or of a special impregnation.

The known kinds of bung rings, such as are used for metal containers are not suitable for containers of non-metallic material, specially not for containers made of cardboard.

There was no suitable bung closure for non-metal packing containers, which would enable such containers to be used for liquid contents.

The invention provides a simple solution for the problem of fixing a bung ring to the shell more particularly of cardboard containers and other non-metal containers, which provides a secure bung closure.

According to the invention a bung ring with an erect beading collar is inserted in the corresponding opening of the container and is beaded over with or without enclosing a sealing means round the container opening. The beading collar is provided with a dentation which during the beading operation forces itself into the material of the container and thereby prevents the bung ring from turning.

The invention shall be more particularly described with reference to the accompanying drawing in which:

Fig. 1 shows in the left-hand half the cross-section through the bung ring 1 fixed to the container shell 2 and in the right-half in elevation the beaded-over bung ring. In dot and dash lines the erect beading collar 3 is shown, which is bent back so far as to enable it to be introduced through the container opening. Between the container shell 2 and the inner

flange the sealing means 5 rests in a corresponding recess 4, the sealing means preventing the contents from leaking. According to a further feature of the invention the cut surface 6 of the container opening is protected against the penetration of moisture by the application of an impregnating layer. This impregnating layer extends over that part of the shell which is engaged by the dentation 7 of the beading-over flange 3. When the container is stored in the open it may, for instance, occur that rain water will penetrate from the outside under the beaded-over flange 3 between the layers of the shell 2 and prematurely destroy them. This danger is avoided by the applied impregnation or protection.

Fig. 2 shows a part cross-section through the container opening with a sealing means 8 completely surrounding the edge of the opening in the container shell 2. This constructional form also shows the provision of an inner lining 9 of the container, for instance a metal foil, which is also embraced by the sealing means at the edge of the opening. The bung ring 10 shown by dot and dash lines is also to be seen, the beading-over edges being erect.

Fig. 3 shows the completely beaded-over bung ring 10 with the enclosed sealing means 8, which completely embraces the container edge. The beaded-over flange 11 of the bung ring is in this case so formed that the sealing means 8 encloses a portion of the outer surface of the container shell 2. In this way an absolutely secure sealing of the bung ring with respect to the contents is ensured; moreover, the special impregnation of the cut face of the container opening becomes superfluous.

A simplification of the bung ring fixture according to the invention is obtained with the constructional form shown in Fig. 4. For providing a seal with respect to the interior there is the sealing means 14 in the recess 13 and for sealing off the effect of moisture from the outside a sealing ring 16 in the recess 15 of the bung ring 12 is provided. Both sealing means 14 and 16 can be introduced into the container opening after being mounted on the

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bung ring. They provide a secure seal. When the flange 17 is beaded-over, the outer sealing means 16 is pressed firmly against the edge of the opening in the container.

- 5 The manner of fixing the bung ring in accordance with the invention only requires very simple construction of the ring and the ring can be fixed to the container shell with the simplest beading tools. It is therefore cheap to carry out but is nevertheless reliable.

10 What I claim is:—

1. A method of fixing a bung ring in the shell of non-metal packing containers, in which the bung ring surrounds the edge of the opening in the container shell, characterised by the feature that the bung ring surrounding the container opening bears against the inside of the container shell leaving a space for accommodating a sealing means, and that a beading collar is provided which after being bent over grips the upper side of the container shell by means of a dentation, steps being taken to ensure that the edge of the container opening is directly or indirectly sealed and that the sealing means is covered by the surrounding bung ring.

2. A method as claimed in Claim 1, characterised by the feature that between the inner flange of the bung ring and the container shell there is a sealing means in a recess.

3. A method as claimed in Claim 1, characterised by the feature that the edge of the opening in the container shell is embraced by a sealing means which is pressed by the bung ring both against the inside edge and the outside edge of the container shell and against the cut surface of the container opening so as to provide a seal.

4. A method as claimed in Claims 1 to 3, characterised by the feature, that the cut surface of the container opening and the surface of the container shell gripped by the dentation are provided with a fluid-tight impregnating layer.

5. A method as claimed in Claims 1 to 4, characterised by the feature, that the sealing means encloses a container lining, for instance of metal or synthetic material, or bears tightly against it.

6. A method as claimed in Claims 1 to 5, characterised by the feature, that for providing a tight-joint with respect to the interior of the container there is provided a sealing means in a recess of the bung ring and for providing a tight-joint with respect to the outside a packing resting in a recess of the beaded-over flange of the bung ring.

7. A bung ring having an inner flange with a recess for accommodating a sealing means and an erect outer beading collar provided with teeth adapted to engage the outside of the shell of a container and prevent the bung ring from turning after said collar has been bent over.

8. A non-metal packing container having a bung ring secured in the shell thereof, in which an inner flange of the bung ring bears against the inside of the container shell and encloses a sealing means, and an outer beading collar of said ring is provided with teeth engaging the outside of the container shell and preventing the bung ring from turning.

9. A non-metal packing container having a bung ring secured therein by a method as claimed in any of claims 1 to 6.

10. A method of fixing a bung ring in the shell of non-metal packing containers, substantially as hereinbefore described and illustrated in the accompanying drawings.

11. A non-metal packing container having a bung ring secured therein by a method substantially as hereinbefore described and illustrated in the accompanying drawings.

12. A bung ring substantially as hereinbefore described and illustrated in the accompanying drawings.

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This drawing is a reproduction of
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Fig. 1

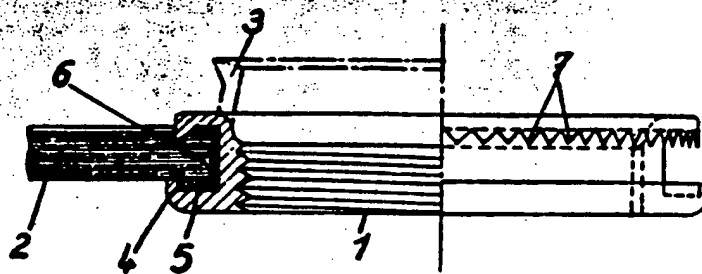


Fig. 2

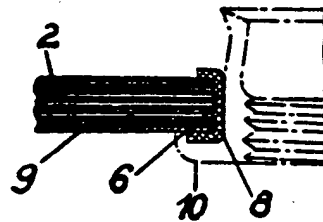


Fig. 3

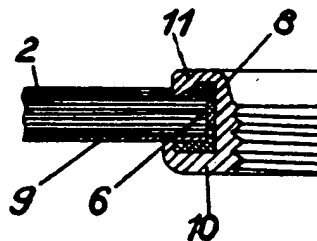
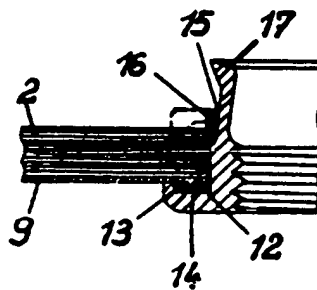


Fig. 4



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